

1
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<110> Moore, et al.

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<141> 1999-01-06

<150> 60/070,875
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<170> PatentIn Ver. 2.0

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363

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cct tcg gac tcc atc agc atc acc tcc cac tac aaa ccc cot gac tgc Pro Ser Asp Ser Ile Ser Ile Thr Ser His Tyr Lys Pro Pro Asp Cys 370 375 380	1275
tca gtg ctg agt aag aag gga gat tac ctc aaa tat cac tac aat gcc Ser Val Leu Ser Lys Lys Gly Asp Tyr Leu Lys Tyr His Tyr Asn Ala 385 390 395	1323
tca ctt ctg gat ggg acc ctg ctg gac tcc acg tgg aat tta ggc aaa Ser Leu Leu Asp Gly Thr Leu Leu Asp Ser Thr Trp Asn Leu Gly Lys 400 405 410	1371
act tac aat att gtt ctg gga tct ggg caa gtt gtg ttg ggg atg gac Thr Tyr Asn Ile Val Leu Gly Ser Gly Gln Val Val Leu Gly Met Asp 415 420 425 430	1419
atg ggt ctc aga gag atg tgc gtt ggc gag aaa cgg aca gtg atc att Met Gly Leu Arg Glu Met Cys Val Gly Glu Lys Arg Thr Val Ile Ile 435 440 445	1467
ccg cct cac ctg ggc tat ggg gaa gct ggc gtg gat gga gaa gtg ccc Pro Pro His Leu Gly Tyr Gly Glu Ala Gly Val Asp Gly Glu Val Pro 450 455 460	1515
ggc agt gcc gta tta gtg ttt gac att gag cts ctg gag ctg gtg gct Gly Ser Ala Val Leu Val Phe Asp Ile Glu Xaa Leu Glu Leu Val Ala 465 470 475	1563
ggc ctt cct gag ggg tac atg ttc ata tgg aat ggt gag gtg tca ccc Gly Leu Pro Glu Gly Tyr Met Phe Ile Trp Asn Gly Glu Val Ser Pro 480 485 490	1611
aac ctc ttt gaa gaa att gac aag gat ggc aac gga gaa gtc ctc ctg Asn Leu Phe Glu Glu Ile Asp Lys Asp Gly Asn Gly Glu Val Leu Leu 495 500 505 510	1659
gaa gag ttc tca gag tac att cac gcc cag gtg gca tct ggc aaa ggg Glu Glu Phe Ser Glu Tyr Ile His Ala Gln Val Ala Ser Gly Lys Gly	1707

515

520

525

1752

aaa ctc gct cct ggc ttt gat gct gag ctg att gtg aag aat atg
Lys Leu Ala Pro Gly Phe Asp Ala Glu Leu Ile Val Lys Asn Met
530 535 540

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tcggggtggg ttgatatatg gggtagaag tttgggctga tcgcccagtga tagtaaaca 2052
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3451

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 <213> Homo sapiens

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 Asp Ala Glu Leu Gln Ile Glu Arg Arg Phe Val Pro Asp Glu Cys Pro
 35 40 45
 Arg Thr Val Arg Ser Gly Asp Phe Val Arg Tyr His Tyr Val Gly Thr
 50 55 60
 Phe Pro Asp Gly Gln Lys Phe Asp Ser Ser Tyr Asp Arg Asp Ser Thr
 65 70 75 80
 Phe Asn Val Phe Val Gly Lys Gly Gln Leu Ile Thr Gly Met Asp Gln
 85 90 95
 Ala Leu Val Gly Met Cys Val Asn Glu Arg Arg Phe Val Lys Ile Pro
 100 105 110
 Pro Lys Leu Ala Tyr Gly Asn Glu Arg Val Ser Gly Val Ile Pro Pro
 115 120 125
 Asn Ser Val Leu His Phe Asp Val Leu Met Asp Ile Trp Asn Ser
 130 135 140
 Glu Asp Gln Val Gln Ile His Thr Tyr Phe Lys Pro Pro Ser Cys Pro
 145 150 155 160
 Arg Thr Ile Gln Val Ser Asp Phe Val Arg Tyr His Tyr Asn Gly Thr
 165 170 175
 Phe Leu Asp Gly Thr Leu Phe Asp Ser Ser His Asn Arg Met Lys Thr
 180 185 190
 Tyr Asp Thr Tyr Val Gly Ile Gly Trp Leu Ile Pro Gly Met Asp Lys
 195 200 205
 Gly Leu Leu Gly Met Cys Val Gly Glu Lys Arg Ile Ile Thr Ile Pro
 210 215 220
 Pro Phe Leu Ala Tyr Gly Glu Asp Gly Asp Gly Lys Asp Ile Pro Gly
 225 230 235 240
 Gln Ala Ser Leu Val Phe Asp Val Ala Leu Leu Asp Leu His Asn Pro
 245 250 255
 Lys Asp Ser Ile Ser Ile Glu Asn Lys Val Val Pro Glu Asn Cys Glu
 260 265 270
 Arg Ile Ser Gln Ser Gly Asp Phe Leu Thr Tyr His Tyr Asn Gly Thr
 275 280 285

Leu Leu Asp Gly Thr Leu Phe Asp Ser Ser Tyr Ser Arg Asn Arg Thr
 290 295 300
 Phe Asp Thr Tyr Ile Gly Gln Gly Tyr Val Ile Pro Gly Met Asp Glu
 305 310 315 320
 Gly Leu Leu Gly Val Cys Ile Gly Glu Lys Arg Xaa Ile Val Val Pro
 325 330 335
 Pro His Leu Gly Tyr Gly Glu Gly Arg Gly Asn Ile Pro Gly Ser
 340 345 350
 Ala Val Leu Val Phe Asp Ile His Val Ile Asp Phe His Asn Pro Ser
 355 360 365
 Asp Ser Ile Ser Ile Thr Ser His Tyr Lys Pro Pro Asp Cys Ser Val
 370 375 380
 Leu Ser Lys Lys Gly Asp Tyr Leu Lys Tyr His Tyr Asn Ala Ser Leu
 385 390 395 400
 Leu Asp Gly Thr Leu Leu Asp Ser Thr Trp Asn Leu Gly Lys Thr Tyr
 405 410 415
 Asn Ile Val Leu Gly Ser Gly Gln Val Val Leu Gly Met Asp Met Gly
 420 425 430
 Leu Arg Glu Met Cys Val Gly Glu Lys Arg Thr Val Ile Ile Pro Pro
 435 440 445
 His Leu Gly Tyr Gly Glu Ala Gly Val Asp Gly Glu Val Pro Gly Ser
 450 455 460
 Ala Val Leu Val Phe Asp Ile Glu Xaa Leu Glu Leu Val Ala Gly Leu
 465 470 475 480
 Pro Glu Gly Tyr Met Phe Ile Trp Asn Gly Glu Val Ser Pro Asn Leu
 485 490 495
 Phe Glu Glu Ile Asp Lys Asp Gly Asn Gly Glu Val Leu Leu Glu Glu
 500 505 510
 Phe Ser Glu Tyr Ile His Ala Gln Val Ala Ser Gly Lys Gly Lys Leu
 515 520 525
 Ala Pro Gly Phe Asp Ala Glu Leu Ile Val Lys Asn Met
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 Thr Tyr Gly Glu Ile Gly Trp Leu Ile Pro Gly Met Asp Lys Gly

15

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ctg ctg ggg atg tgt gtg ggt gag aag cgc atc atc acc att cct cct				95
Leu Leu Gly Met Cys Val Gly Glu Lys Arg Ile Ile Thr Ile Pro Pro				
20	25	30		
ttt ctg gcc tat gga gag gat ggg aaa gac att ccc ggt cag				143
Phe Leu Ala Tyr Gly Glu Asp Gly Asp Lys Asp Ile Pro Gly Gln				
35	40	45		
gca tct ctg gtg ttt gat gtt gca tta ttg gac ctc cat aac ccc aag				191
Ala Ser Leu Val Phe Asp Val Ala Leu Leu Asp Leu His Asn Pro Lys				
50	55	60		
gac agc att tcc att gag aac aag gta gta cct gaa aac tgt gag cgg				239
Asp Ser Ile Ser Ile Glu Asn Lys Val Val Pro Glu Asn Cys Glu Arg				
65	70	75		
ata agt caa agt ggg gac ttt ctc agg tat cat tac aat ggc aac ctt				287
Ile Ser Gln Ser Gly Asp Phe Leu Arg Tyr His Tyr Asn Gly Thr Leu				
80	85	90		
ctg gat ggc acc ctc ttt gat tcc agc tac tct cgg aac cgc acg ttt				335
Leu Asp Gly Thr Leu Phe Asp Ser Ser Tyr Ser Arg Asn Arg Thr Phe				
100	105	110		
gac acg tac att ggg cag ggc tac gtg att cct ggg atg gat gaa ggt				383
Asp Thr Tyr Ile Gly Gln Gly Tyr Val Ile Pro Gly Met Asp Glu Gly				
115	120	125		
cta ctt ggt gtt tgc att gga gaa aag cga agg att gtg gtc ccg cct				431
Leu Leu Gly Val Cys Ile Gly Glu Lys Arg Arg Ile Val Val Pro Pro				
130	135	140		
cac ctg ggg tat gga gag gaa gga aca ggg aat atc ccc ggc tcg gct				479
His Leu Gly Tyr Gly Glu Gly Arg Gly Asn Ile Pro Gly Ser Ala				
145	150	155		
gtg ctg gtg ttt gac atc cat gtg atc gac ttc cac aac cct tcg gac				527
Val Leu Val Phe Asp Ile His Val Ile Asp Phe His Asn Pro Ser Asp				
160	165	170	175	
tcc atc agc atc acc tcc cac tac aaa ccc cct gac tgc tca gtg ctg				575
Ser Ile Ser Ile Thr Ser His Tyr Lys Pro Pro Asp Cys Ser Val Leu				
180	185	190		
agt aag aag gga gat tac ctc aaa tat cac tac aat gcc tca ctt ctg				623
Ser Lys Lys Gly Asp Tyr Leu Lys Tyr His Tyr Asn Ala Ser Leu Leu				
195	200	205		
gat ggg acc ctg ctg gac tcc acg tgg aat tta ggc aaa act tac aat				671
Asp Gly Thr Leu Leu Asp Ser Thr Trp Asn Leu Gly Lys Thr Tyr Asn				
210	215	220		
att gtt ctg gga tct ggg caa gtt gtg ttg ggg atg gac atg ggt ctc				719
Ile Val Leu Gly Ser Gly Gln Val Val Leu Gly Met Asp Met Gly Leu				
225	230	235		
aga gag atg tgc gtt ggc gag aaa cgg aca gtg atc att ccg cct cac				767
Arg Glu Met Cys Val Gly Glu Lys Arg Thr Val Ile Ile Pro Pro His				
240	245	250	255	

ctg ggc tat ggg gaa gct ggc gtg gat gga gaa gtg ccc ggc agt gcc 815
 Leu Gly Tyr Gly Glu Ala Gly Val Asp Gly Glu Val Pro Gly Ser Ala
 260 265 270

gta tta gtg ttt gac att gag ctg ctg gag ctg gtg gct ggc ctt cct 863
 Val Leu Val Phe Asp Ile Glu Leu Leu Glu Leu Val Ala Gly Leu Pro
 275 280 285

gag ggg tac atg ttc ata tgg aat ggt gag gtg tca ccc aac ctc ttt 911
 Glu Gly Tyr Met Phe Ile Trp Asn Gly Glu Val Ser Pro Asn Leu Phe
 290 295 300

gaa gaa atc aac aag gtg aca ttt ttc tgc tgc cca ttt gtg tcc tgg 959
 Glu Glu Ile Asn Lys Val Thr Phe Phe Cys Cys Pro Phe Val Ser Trp
 305 310 315

aga cgg tgg tac cct gaa ggc aga ggc cag ctg ccg caa gac agc aat 1007
 Arg Arg Trp Tyr Pro Glu Gly Arg Gly Gln Leu Pro Gln Asp Ser Asn
 320 325 330 335

gac agt cca cct gcc gac ctg att cct gca tca tgg aat aac cac atg 1055
 Asp Ser Pro Pro Ala Asp Leu Ile Pro Ala Ser Trp Asn Asn His Met
 340 345 350

gct acc ttc tat cct ctg ttc cca aat ggt ggc act tat cct gaa 1103
 Ala Thr Phe Tyr Pro Leu Phe Pro Asn Gly Gly Thr Tyr Pro Glu
 355 360 365

gtc gtc aat gat ttc cct ttg aaa cta ctt tat ttt act aat tta aac 1151
 Val Val Asn Asp Phe Pro Leu Lys Leu Leu Tyr Phe Thr Asn Leu Asn
 370 375 380

tat ttt gta ctg atg tagccctgag gtagttcatg aaaaatgctg tgcaactcatt 1206
 Tyr Phe Val Leu Met
 385

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 20 25 30

Leu Ala Tyr Gly Glu Asp Gly Asp Gly Lys Asp Ile Pro Gly Gln Ala
 35 40 45

Ser Leu Val Phe Asp Val Ala Leu Leu Asp Leu His Asn Pro Lys Asp
 50 55 60

Ser Ile Ser Ile Glu Asn Lys Val Val Pro Glu Asn Cys Glu Arg Ile
 65 70 75 80

Ser Gln Ser Gly Asp Phe Leu Arg Tyr His Tyr Asn Gly Thr Leu Leu
 85 90 95

Asp Gly Thr Leu Phe Asp Ser Ser Tyr Ser Arg Asn Arg Thr Phe Asp
 100 105 110

Thr Tyr Ile Gly Gln Gly Tyr Val Ile Pro Gly Met Asp Glu Gly Leu
 115 120 125

Leu Gly Val Cys Ile Gly Glu Lys Arg Arg Ile Val Val Pro Pro His
 130 135 140

Leu Gly Tyr Gly Glu Glu Gly Arg Gly Asn Ile Pro Gly Ser Ala Val
 145 150 155 160

Leu Val Phe Asp Ile His Val Ile Asp Phe His Asn Pro Ser Asp Ser
 165 170 175

Ile Ser Ile Thr Ser His Tyr Lys Pro Pro Asp Cys Ser Val Leu Ser
 180 185 190

Lys Lys Gly Asp Tyr Leu Lys Tyr His Asn Ala Ser Leu Leu Asp
 195 200 205

Gly Thr Leu Leu Asp Ser Thr Trp Asn Leu Gly Lys Thr Tyr Asn Ile
 210 215 220

Val Leu Gly Ser Gly Gln Val Val Leu Gly Met Asp Met Gly Leu Arg
 225 230 235 240

Glu Met Cys Val Gly Glu Lys Arg Thr Val Ile Ile Pro Pro His Leu
 245 250 255

Gly Tyr Gly Glu Ala Gly Val Asp Gly Glu Val Pro Gly Ser Ala Val
 260 265 270

Leu Val Phe Asp Ile Glu Leu Leu Glu Leu Val Ala Gly Leu Pro Glu
 275 280 285

Gly Tyr Met Phe Ile Trp Asn Gly Glu Val Ser Pro Asn Leu Phe Glu
 290 295 300

Glu Ile Asn Lys Val Thr Phe Phe Cys Cys Pro Phe Val Ser Trp Arg
 305 310 315 320

Arg Trp Tyr Pro Glu Gly Arg Gly Gln Leu Pro Gln Asp Ser Asn Asp
 325 330 335

Ser Pro Pro Ala Asp Leu Ile Pro Ala Ser Trp Asn Asn His Met Ala
 340 345 350

Thr Phe Tyr Pro Ile Phe Pro Asn Gly Gly Thr Tyr Pro Glu Val
 355 360 365

Val Asn Asp Phe Pro Leu Lys Leu Leu Tyr Phe Thr Asn Leu Asn Tyr
 370 375 380

Phe Val Leu Met
 385